

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (Currently Amended) An information processing system comprising:
a program information providing apparatus for providing program information about programs,
a portable information terminal apparatus owned by a user, and
an information processing apparatus having recording and reproducing functions;
wherein said program information providing apparatus includes:
storing means for storing said program information; and
providing means for retrieving said program information from said storing means before providing the retrieved program information to said portable information terminal apparatus, said providing means retrieving said program information based on identifying a user ID associated with an information request transmitted from said portable information terminal apparatus,
wherein upon identifying said user ID said retrieved program information includes registered content applicable to said user ID, and
wherein said user ID is unidentifiable, said retrieved program information includes commonly watched channels;

convertor means coupled to said storing means and providing means, said convertor means converting, under control of said providing means, said program information retrieved from said storing means from a page description language format structured hierarchically using tags to another database format that excludes said tags, wherein said another database format comprises a less amount of data than said page description language and requires no data analysis following retrieval,

wherein said portable information terminal apparatus includes:

acquiring means for acquiring said program information from said program information providing apparatus;

establishing means for establishing preset information for presetting a desired program to be recorded unattended based on said program information acquired by said acquiring means; and

transmitting means for transmitting to said information processing apparatus said preset information established by said establishing means,

wherein the converted program information is converted into a predetermined format that allows a display program of said portable information terminal apparatus to display on the program information,

wherein said portable information terminal apparatus generates an icon representing the received converted content data that is available for reproduction, and outputs the generated icons; and

wherein said information processing apparatus includes:

receiving means for receiving said preset information from said portable information terminal apparatus; and

recording controlling means for controlling the unattended recording of said desired program based on said preset information received by said receiving means.

2. (Previously Presented) The information processing system according to claim 1, wherein said program information providing apparatus further includes converting means for retrieving said program information from said storing means before converting the retrieved program information into data of a file format compatible with said portable information terminal apparatus; and
wherein said providing means provides said data converted by said converting means to said portable information terminal apparatus.

3. (Previously Presented) The information processing system according to claim 1, wherein said portable information terminal apparatus further includes generating means for generating a preset signal corresponding to said preset information established by said establishing means; and
wherein said transmitting means transmits to said information processing apparatus infrared rays modulated to represent said preset signal generated by said generating means.

4. (Previously Presented) The information processing system according to claim 1,
wherein said portable information terminal apparatus further includes generating means
for generating a preset signal corresponding to said preset information established by said
establishing means; and
wherein said transmitting means transmits to said information processing apparatus radio
waves modulated to represent said preset signal generated by said generating means.

5. (Currently Amended) An information processing system comprising
a program information providing apparatus for providing program information about
programs,
a portable information terminal apparatus owned by a user, and
an information processing apparatus having recording and reproducing functions;
wherein said program information providing apparatus includes:
storing means for storing said program information and advertisement
information; and
providing means for retrieving said program information and said advertisement
information from said storing means before providing the retrieved information to said portable
information terminal apparatus, said providing means retrieving said program information based
on identifying a user ID associated with an information request transmitted from said portable
information terminal apparatus,

wherein upon identifying said user ID said retrieved program information includes registered content applicable to said user ID, and

wherein said user ID is unidentifiable, said retrieved program information includes commonly watched channels;

convertor means coupled to said storing means and providing means, said convertor means converting, under control of said providing means, said program information retrieved from said storing means from a page description language format structured hierarchically using tags to another database format that excludes said tags, wherein said another database format comprises a less amount of data than said page description language and requires no data analysis following retrieval,

wherein said portable information terminal apparatus includes:

acquiring means for acquiring said program information and said advertisement information sent from said program information providing apparatus;

establishing means for establishing preset information for presetting a desired program to be recorded unattended based on said program information acquired by said acquiring means; and

transmitting means for transmitting to said information processing apparatus said preset information established by said establishing means,

wherein the converted program information is converted into a predetermined format that allows a display program of said portable information terminal apparatus to display on the program information,

wherein said portable information terminal apparatus generates an icon representing the received converted content data that is available for reproduction, and outputs the generated icons; and

wherein said information processing apparatus includes:

receiving means for receiving said preset information from said portable information terminal apparatus; and

recording controlling means for controlling the unattended recording of said desired program based on said preset information received by said receiving means.

6. (Previously Presented) The information processing system according to claim 5, wherein said program information providing apparatus further includes converting means for retrieving said program information and said advertisement information from said storing means before converting the retrieved information into data of a file format compatible with said portable information terminal apparatus; and

wherein said providing means provides said data converted by said converting means to said portable information terminal apparatus.

7. (Currently Amended) An information processing system comprising:
a portable information terminal apparatus owned by a user; and
an information processing apparatus which has recording, convertor means, and reproducing functions, which stores program information about programs and which is owned by said user, said information processing apparatus retrieving said program information based on

identifying a user ID associated with an information request transmitted from said portable information terminal apparatus,

wherein upon identifying said user ID said retrieved program information includes registered content applicable to said user ID, and

wherein said user ID is unidentifiable, said retrieved program information includes commonly watched channels;

said convertor means operatively coupled to a storing means, said convertor means converting said program information retrieved from said storing means from a page description language format structured hierarchically using tags to another database format that excludes said tags,

wherein said another database format comprises a less amount of data than said page description language and requires no data analysis following retrieval.

wherein said portable information terminal apparatus includes:

acquiring means for acquiring said program information from said information processing apparatus;

establishing means for establishing preset information for presetting a desired program to be recorded unattended based on said program information acquired by said acquiring means; and

transmitting means for transmitting to said information processing apparatus said preset information established by said establishing means,

wherein the converted program information is converted into a predetermined format that allows a display program of said portable information terminal apparatus to display on the program information,

wherein said portable information terminal apparatus generates an icon representing the received converted content data that is available for reproduction, and outputs the generated icons; and

wherein said information processing apparatus includes:

receiving means for receiving said preset information sent from said portable information terminal apparatus; and

recording controlling means for controlling the unattended recording of said desired program based on said preset information received by said receiving means.

8. (Previously Presented) The information processing system according to claim 7, wherein said acquiring means further acquires said program information sent from another portable information terminal apparatus.

9. (Currently Amended) A portable information terminal apparatus connected to a recording/reproducing apparatus, said portable information terminal apparatus comprising:
acquiring means for acquiring, from a storing means, program information about programs, wherein said program information is acquired based on identifying a user ID associated with an information request transmitted from said portable information terminal apparatus, said acquired program information converted from a page description language format

structured hierarchically using tags to another database format that excludes said tags, wherein said another database format comprises a less amount of data than said page description language and requires no data analysis following retrieval,

wherein the program information is converted into a predetermined format prior to acquiring, that allows a display program of said portable information terminal apparatus to display on the program information,

wherein said portable information terminal apparatus generates an icon representing the received converted content data that is available for reproduction, and outputs the generated icons, and

wherein upon identifying said user ID said retrieved program information includes registered content applicable to said user ID, and

wherein said user ID is unidentifiable, said retrieved program information includes commonly watched channels;

displaying means for displaying said program information acquired by said acquiring means;

establishing means for establishing preset information for presetting a desired program to be recorded unattended based on an operational input made by a user referring to said program information displayed by said displaying means;

transmitting means for transmitting to said recording/reproducing apparatus said preset information established by said establishing means, and

registering means for registering detailed information for designating said program information to be acquired by said acquiring means,

wherein said displaying means further displays said detailed information registered by
said registering means.

10. (Previously Presented) The portable information terminal apparatus according to claim 9,
further comprising judging means;

wherein said program information includes detailed program information associated with
advertisement information;

wherein said judging means judges whether the program information acquired by said
acquiring means is associated with said advertisement information; and

wherein, if said judging means judges that said program information is not associated
with said advertisement information, then said displaying means does not display said program
information.

11. (Previously Presented) The portable information terminal apparatus according to
claim 10,

wherein said detailed program information includes either an indicator pointing to a
location where further information associated with said program information exists, or
information about a reference to the associated information.

12. (Previously Presented) The portable information terminal apparatus according to
claim 10,

wherin said advertisement information includes detailed advertisement information associated with said advertisement information; and

wherein said detailed advertisement information includes either an indicator pointing to a location where further information associated with said advertisement information exists, or information about a reference to the associated information.

13. (Previously Presented) The portable information terminal apparatus according to claim 9, further comprising judging means and updating means;

wherein said program information is associated with advertisement information;

wherein said advertisement information includes time limit information denoting a time limit;

wherein said judging means judges whether said time limit denoted by said time limit information in said advertisement information has expired; and

wherein said updating means updates said program information based on the judgment by said judging means.

14. (Previously Presented) The portable information terminal apparatus according to claim 9, further comprising:

storing means for storing said preset information established by said establishing means; and

controlling means for controlling exchanges of information with said recording/reproducing apparatus;

wherein said transmitting means transmits said preset information from said storing means to said recording/reproducing apparatus under control of said controlling means.

15. (Cancelled)

16. (Previously Presented) The portable information terminal apparatus according to claim 9, wherein said detailed information includes any one of a region, a channel, and a user ID.

17. (Previously Presented) The portable information terminal apparatus according to claim 9, wherein said registering means registers a plurality of items of said detailed information, and

wherein said acquiring means acquires said program information corresponding to said plurality of items of said detailed information registered by said registering means.

18. (Previously Presented) The portable information terminal apparatus according to claim 9, wherein, if said program information corresponding to said detailed information is acquired by said acquiring means, then said displaying means further displays a predetermined mark pointing to said detailed information.

19. (Previously Presented) The portable information terminal apparatus according to claim 9, further comprising:

controlling means for controlling exchanges of information with said recording/reproducing apparatus; and receiving means which, under control of said controlling means, receives from said recording/reproducing apparatus a message regarding preset status of said desired program as part of said preset information transmitted from said transmitting means; wherein said displaying means further displays a predetermined mark pointing to said detailed information based on said message received by said receiving means.

20. (Previously Presented) The portable information terminal apparatus according to claim 9, further comprising receiving means for receiving image data derived from conversion of said desired program, recorded by said recording/reproducing apparatus, into a predetermined file format;

wherein said displaying means further displays said image data received by said receiving means.

21. (Previously Presented) The portable information terminal apparatus according to claim 9, further comprising:

managing means for managing a schedule list in which to register what is scheduled by said user;

judging means for judging whether or not to write said preset information established by said establishing means to said schedule list managed by said managing means; and writing means which, based on the judgment by said judging means, writes said preset information established by said establishing means to said schedule list managed by said managing means; wherein said displaying means further displays said schedule list including said preset information written by said writing means.

22. (Previously Presented) The portable information terminal apparatus according to claim 9, wherein said transmitting means transmits infrared rays modulated to represent a preset signal corresponding to said preset information.
23. (Previously Presented) The portable information terminal apparatus according to claim 9, wherein said transmitting means transmits radio waves modulated to represent a preset signal corresponding to said preset information.
24. (Previously Presented) The portable information terminal apparatus according to claim 9, wherein said transmitting means transmits said preset information over a network.
25. (Previously Presented) The portable information terminal apparatus according to claim 9, further comprising updating means for updating said preset information established by said establishing means.

26. (Currently Amended) An information processing method for use with a portable information terminal apparatus connected to a recording/reproducing apparatus, said information processing method comprising the steps of:

acquiring, from a storing means, program information about programs, wherein said program information is acquired based on identifying a user ID associated with an information request transmitted from said portable information terminal apparatus, said acquired program information converted from a page description language format structured hierarchically using tags to another database format that excludes said tags, wherein said another database format comprises a less amount of data than said page description language and requires no data analysis following retrieval, and

wherein upon identifying said user ID said retrieved program information includes registered content applicable to said user ID, and

wherein said user ID is unidentifiable, said retrieved program information includes commonly watched channels;

controlling display of said program information acquired in said acquiring step;

establishing preset information for presetting a desired program to be recorded unattended based on an operational input made by a user referring to said program information displayed under control of said controlling step; and

transmitting to said recording/reproducing apparatus said preset information established in said establishing step,

wherein the program information is converted into a predetermined format prior to acquiring that allows a display program of said portable information terminal apparatus to display on the program information,

wherein said portable information terminal apparatus generates an icon representing the received converted content data that is available for reproduction, and outputs the generated icons.

27. (Currently Amended) A non-transitory computer-readable medium recorded therein an executable program, when executed, controlling a portable information terminal apparatus connected to a recording/reproducing apparatus, the executable program comprising the steps of:

acquiring, from a storing means, program information about programs, wherein said program information is acquired based on identifying a user ID associated with an information request transmitted from said portable information terminal apparatus, said acquired program information converted from a page description language format structured hierarchically using tags to another database format that excludes said tags, wherein said another database format comprises a less amount of data than said page description language and requires no data analysis following retrieval, and

wherein upon identifying said user ID said retrieved program information includes registered content applicable to said user ID, and

wherein said user ID is unidentifiable, said retrieved program information includes commonly watched channels;

controlling display of said program information acquired in said acquiring step;

establishing preset information for presetting a desired program to be recorded unattended based on an operational input made by a user referring to said program information displayed under control of said controlling step; and transmitting to said recording/reproducing apparatus said preset information established in said establishing step,

wherein the program information is converted into a predetermined format prior to acquiring that allows a display program of said portable information terminal apparatus to display on the program information,

wherein said portable information terminal apparatus generates an icon representing the received converted content data that is available for reproduction, and outputs the generated icons.

28. (Cancelled)

29. (Currently Amended) A program information providing apparatus for providing program information about programs to an information processing apparatus over a network, said program information providing apparatus comprising:

storing means for storing said program information and advertisement information; converting means coupled to said storing means for, based on a request from said information processing apparatus, retrieving said program information and said advertisement information from said storing means and then converting the retrieved information into data of a predetermined format compatible with said information processing apparatus, said convertor

means converting said retrieved program information from a page description language format structured hierarchically using tags to another database format that excludes said tags, wherein said another database format comprises a less amount of data than said page description language and requires no data analysis following retrieval; and

providing means coupled to said converting means for providing said data converted by said converting means to said information processing apparatus over said network, said providing means retrieving said program information based on identifying a user ID associated with an information request transmitted from said portable information terminal apparatus, wherein said converting means is operable to convert said retrieved program information under the control of said providing means,

wherein upon identifying said user ID said retrieved program information includes registered content applicable to said user ID, and

wherein said user ID is unidentifiable, said retrieved program information includes commonly watched channels,

wherein the retrieved information is converted into a predetermined format prior to providing that allows a display program of a portable information terminal apparatus to display on the retrieved information.

wherein said portable information terminal apparatus generates an icon representing the provided converted retrieved data that is available for reproduction, and outputs the generated icons.

30. (Previously Presented) The program information providing apparatus according to claim

29, further comprising charging means for calculating a fee for inserting said advertisement information and charging said fee on a sponsor of said advertisement information.

31. (Previously Presented) The program information providing apparatus according to claim 29, wherein said storing means further stores user information about a user who owns said information processing apparatus.

32. (Previously Presented) The program information providing apparatus according to claim 29,

wherein said program information includes detailed program information associated with said program information, and

wherein said advertisement information includes detailed advertisement information associated with said advertisement information.

33. (Previously Presented) The program information providing apparatus according to claim 32,

wherein said detailed program information includes either an indicator pointing to a location where further information associated with said program information exists, or information about a reference to the associated information.

34. (Previously Presented) The program information providing apparatus according to claim 32, wherein said detailed advertisement information includes either an indicator pointing to a location where further information associated with said advertisement information exists, or information about a reference to the associated information.

35. (Previously Presented) The program information providing apparatus according to claim 29,

wherein said advertisement information includes time limit information denoting a time limit.

36. (Currently Amended) A program information providing method for use with a program information providing apparatus for providing program information about programs to an information processing apparatus over a network, said program information providing method comprising the steps of:

controlling storage of said program information and advertisement information; retrieving, based on a request from said information processing apparatus, said program information and said advertisement information from storage under control of said storage controlling step;

converting the retrieved information into data of a predetermined format compatible with said information processing apparatus, said retrieved program information converted from a page description language format structured hierarchically using tags to another database format that

excludes said tags, wherein said another database format comprises a less amount of data than said page description language and requires no data analysis following retrieval; and

providing said data converted in said converting step to said information processing apparatus over said network, said providing step retrieving said program information based on identifying a user ID associated with an information request transmitted from said portable information terminal apparatus,

wherein upon identifying said user ID said retrieved program information includes registered content applicable to said user ID, and

wherein said user ID is unidentifiable, said retrieved program information includes commonly watched channels,

wherein the retrieved information is converted into a predetermined format prior to providing that allows a display program of a portable information terminal apparatus to display on the retrieved information,

wherein said portable information terminal apparatus generates an icon representing the provided converted retrieved data that is available for reproduction, and outputs the generated icons.

37. (Currently Amended) A non-transitory computer-readable medium, recorded therein an executable program, when executed, controlling a program information providing apparatus which provides program information about programs to an information processing apparatus over a network, the executable program comprising the steps of:

controlling storage of said program information and advertisement information;

retrieving, based on a request from said information processing apparatus, said program information and said advertisement information from storage under control of said storage controlling step;

converting the retrieved information into data of a predetermined format compatible with said information processing apparatus, said retrieved program information converted from a page description language format structured hierarchically using tags to another database format that excludes said tags, wherein said another database format comprises a less amount of data than said page description language and requires no data analysis following retrieval; and

providing said data converted in said converting step to said information processing apparatus over said network, said providing means retrieving said program information based on identifying a user ID associated with an information request transmitted from said portable information terminal apparatus,

wherein upon identifying said user ID said retrieved program information includes registered content applicable to said user ID, and

wherein said user ID is unidentifiable, said retrieved program information includes commonly watched channels,

wherein the retrieved information is converted into a predetermined format prior to providing that allows a display program of a portable information terminal apparatus to display on the retrieved information,

wherein said portable information terminal apparatus generates an icon representing the provided converted retrieved data that is available for reproduction, and outputs the generated icons.

38. (Canceled)

39. (Currently Amended) A recording/reproducing apparatus connected to a portable information terminal apparatus, said recording/reproducing apparatus comprising:
receiving means for receiving from said portable information terminal apparatus preset information for presetting a desired program to be recorded unattended, said preset information determined from program information received by said portable information terminal apparatus, wherein receiving said program information is based on identifying a user ID associated with an information request transmitted from said portable information terminal apparatus,
wherein upon identifying said user ID said retrieved program information includes registered content applicable to said user ID, and
wherein said user ID is unidentifiable, said retrieved program information includes commonly watched channels;
converter means coupled to a storing means and converting said program information from a page description language format structured hierarchically using tags to another database format that excludes said tags, wherein said another database format comprises a less amount of data than said page description language and requires no data analysis following retrieval; and
recording controlling means for controlling the unattended recording of said desired program based on said preset information received by said receiving means,
wherein the preset information is converted to a predetermined format compatible with the recording/reproducing apparatus,

wherein the converted program information is converted into a predetermined format that allows a display program of said portable information terminal apparatus to display on the program information,

wherein said portable information terminal apparatus generates an icon representing the received converted content data that is available for reproduction, and outputs the generated icons.

40. (Previously Presented) The recording/reproducing apparatus according to claim 39, further comprising:

controlling means into image data of a predetermined file format in response to a request from said portable information terminal apparatus; and

transmitting means for transmitting said image data converted by said converting means to said portable information terminal apparatus.

41. (Previously Presented) The recording/reproducing apparatus according to claim 39, further comprising transmitting means for transmitting to said portable information terminal apparatus a message regarding preset status of said desired program as part of said preset information received by said receiving means.

42. (Currently Amended) A recording/reproducing method for use with a recording/reproducing apparatus connected to a portable information terminal apparatus, said recording/reproducing method comprising the steps of:

receiving from said portable information terminal apparatus preset information for presetting a desired program to be recorded unattended, said preset information determined from program information received by said portable information terminal apparatus, said received program information converted from a page description language format structured hierarchically using tags to another database format that excludes said tags, wherein said another database format comprises a less amount of data than said page description language and requires no data analysis following retrieval,

wherein receiving said program information is based on identifying a user ID associated with an information request transmitted from said portable information terminal apparatus, wherein upon identifying said user ID said retrieved program information includes registered content applicable to said user ID, and

wherein said user ID is unidentifiable, said retrieved program information includes commonly watched channels; and

controlling the unattended recording of said desired program based on said preset information received in said receiving step,

wherein the preset information is converted to a predetermined format compatible with the recording/reproducing apparatus,

wherein the converted program information is converted into a predetermined format that allows a display program of said portable information terminal apparatus to display on the program information,

wherein said portable information terminal apparatus generates an icon representing the received converted content data that is available for reproduction, and outputs the generated

icons.

43. (Currently Amended) A non-transitory computer-readable medium recorded therein an executable program, when executed, controlling a recording/reproducing apparatus connected to a portable information terminal apparatus, the executable program comprising the steps of:

receiving from said portable information terminal apparatus preset information for presetting a desired program to be recorded unattended, said preset information determined from program information received by said portable information terminal apparatus, said received program information converted from a page description language format structured hierarchically using tags to another database format that excludes said tags, wherein said another database format comprises a less amount of data than said page description language and requires no data analysis following retrieval,

wherein receiving said program information is based on identifying a user ID associated with an information request transmitted from said portable information terminal apparatus,

wherein upon identifying said user ID said retrieved program information includes registered content applicable to said user ID, and

wherein said user ID is unidentifiable, said retrieved program information includes commonly watched channels; and

controlling the unattended recording of said desired program based on said preset information received in said receiving step,

wherein the preset information is converted to a predetermined format compatible with the recording/reproducing apparatus,

wherein the converted program information is converted into a predetermined format that allows a display program of said portable information terminal apparatus to display on the program information,

wherein said portable information terminal apparatus generates an icon representing the received converted content data that is available for reproduction, and outputs the generated icons.

44. (Canceled)

45. (Canceled)

46. (Previously Presented) The information processing system according to claim 1, wherein said storing means comprises:

first storing means for storing said program information in a first file format; and
second storing means for storing said program information in a second file format;
wherein said providing means is operative to retrieve said program information from said first or second storing means based on a received request, such that,
if said request comprises a first file format then said program information is retrieved from said first storing means in said first file format, and

if said request comprises a second file format then said program information is retrieved from said second storing means in said second file format, said second file format comprising less data compared to said first file format.

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